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ABSTRACT

Research has suggested that sex role identity is a major factor in sports anxiety across the sexes. Sex and sex role differences in sports anxiety as expressed by collegiate swimmers prior to competition were investigated on both self-report and physiological levels. An hour before practice and competition the blood pressures of 13 female and 14 male swimmers were taken. Subjects also completed the Multiple Affect Adjective Checklist twice to measure anxiety, hostility and depression and the Bem Sex Role Inventory (BSRI) to indicate subjects' relative masculinity and femininity. Consistent with sex role prescriptions, males had higher systolic blood pressure than females, yet they reported lower feelings of anxiety and hostility when facing swimming competition. Results of a comparison of BSRI data from these swimmers and 50 male and 50 female college students suggested that higher than average levels of masculinity were associated with individuals who swam competitively in college, regardless of sex. The lack of emotional expression among male swimmers, consistent with their role definition of masculinity, may have resulted in higher blood pressures associated with competition. (NRB)

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Collegiate Swimmers: Sex Differences in Self Reported and Physiological Stress Indices

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Collegiate Swimmers: Sex Differences in Self Reported and Physiological Stress Indices

Wark and Wittig (1979) looked at sex and sex role differences in sports anxiety. Their results indicate that consistent with sex role prescriptions males who ascribe to the masculine sex role reported significantly less sports anxiety than females who identified as feminine. In a followup, Wittig (Note 1) noted that sex role identity (i.e., specifically femininity) seemed to be the major predictive variable for sports anxiety across sex.

Sex and sex role differences in sports anxiety as expressed by collegiate swimmers prior to competition were investigated in the present study on both the self report and the physiological levels. Sex differences in these two expressions of stress have been reported in a variety of setting with women being more likely than men to admit to feelings of fear or anxiety (Maccoby & Jacklin, 1974). However, with regards to the physiological underpinnings of stress the evidence is unclear which sex is more likely to show arousal to fearful/stressful situations (Duffy, 1962).

Method

Subjects

Thirteen female and fourteen male collegiate swimmers at a northeastern college participated in the present study. They ranged in age from 19 to 23 and represented a variety of college majors.

Apparatus

A Nelkin Hemo-Sphyg blood pressure cuff was used to determine blood pressure.

Instruments

Multiple Affect Adjective Checklist (MAACL; Zuckerman & Lubin, 1965): This is a list of 132 adjectives which can be scored for anxiety, hostility and depression.

Each subject filled out the MAACL two times during the course of the experiment in terms of how they felt at that moment.

Bem Sex Role Inventory (BSRI; Bem, 1974): Subjects filled out this 60-item scale in terms of their perceptions of themselves. The BSRI was designed to measure masculinity and femininity as separate unipolar traits.

Procedure

One hour before practice and competition the blood pressure of these athletes was taken and they were given to all swimmers at a separate testing session later in the same semester. The MAACL was scored for anxiety, hostility, and depression while the BSRI was used to indicate an individuals relative masculinity and femininity. These procedures took place in the swimming coaches offices which were located at the pool deck.

Results

Separate analyses of covariance were calculated on the two blood pressure scores (systolic and diastolic) and on the three self reported emotion scores (anxiety, hostility, and depression), with the practice score as the covariate in each case. Significant sex differences were found for systolic blood pressure ($F(3,24) = 12.36$, $p < .01$), anxiety ($F(1,24) = 6.22$, $p < .05$), and hostility ($F(1,24) = 5.76$, $p < .05$). Consistent with sex role prescriptions males had higher systolic blood pressure than females yet they reported lower feelings of anxiety and hostility when facing swimming competition. Additionally, this group of females were significantly more feminine than their male counterparts ($t(20) = 2.47$, $p < .025$) but did not differ in self reported masculinity. Although BSRI information was available on only nine of the 14 male swimmers.

In order to aid in interpretation masculinity and femininity scores of these

swimmers were compared to 50 male and 50 female students from the same college on the BSRI. Multiple t-tests between these four groups (male students and swimmers and female students and swimmers) on masculinity and femininity sum scores on the BSRI were calculated. Contrary to the swimmers, male students reported themselves as more masculine than their female counterparts (t (98) = 1.59, $p < .06$). Within sex comparisons of masculinity revealed that both types of swimmers perceived themselves as more masculine than their same sex counterparts (males: t (57) = 1.61, $p < .06$; females: t (61) = 2.49, $p < .01$).

Regarding femininity, there were no within sex differences contrary to the case with masculinity and similar to the swimmers, female students reported themselves as being significantly more feminine that male students (t (98) = 6.54, $p < .005$).

Discussion

It seems that higher than average levels of masculinity are associated with individuals who swim competitively in college, irregardless of sex. This elevated masculinity is not surprising as competition is a major component of the masculine role. It is interesting, however, that these relatively masculinized women were, like the students, more feminine than their male counterparts and no less feminine than the female students. This explains their "feminine" reaction to athletic stress (i.e., the verbalization of feelings of anxiety associated with the stress of the forthcoming competition). This combination of sex role identity characteristics implies that these women should be androgynous in said identity and in fact 62% were so classified by the median split method (Spence, Helmreich, & Stapp, 1975).

The sex difference in hostility, however, is more perplexing. Perhaps, these relatively masculine women viewed hostility as a necessary prerequisite to competition,

certainly a reasonable perspective; but why more so then men? One might speculate about female athletes believing that they need to act out what they think appropriate masculine behaviors are in this typically "male" situation. Yet with all this hyped up emotionality (higher anxiety and hostility) the women athletes experienced lower blood pressure. This certainly supports the adage that if one expresses ones emotions outwardly the physiological domain is releaved of such tension. The lack of male emotional expression is of course consistent with their role definition as masculine and not feminine but such a role may leave them with higher blood pressures associated with competition.

Footnotes

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Reference Notes

1. Wittig, A.F. Sex role, sports, and anxiety. Paper presented at the annual meeting of the American Psychological Association, Montreal, September, 1980.

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